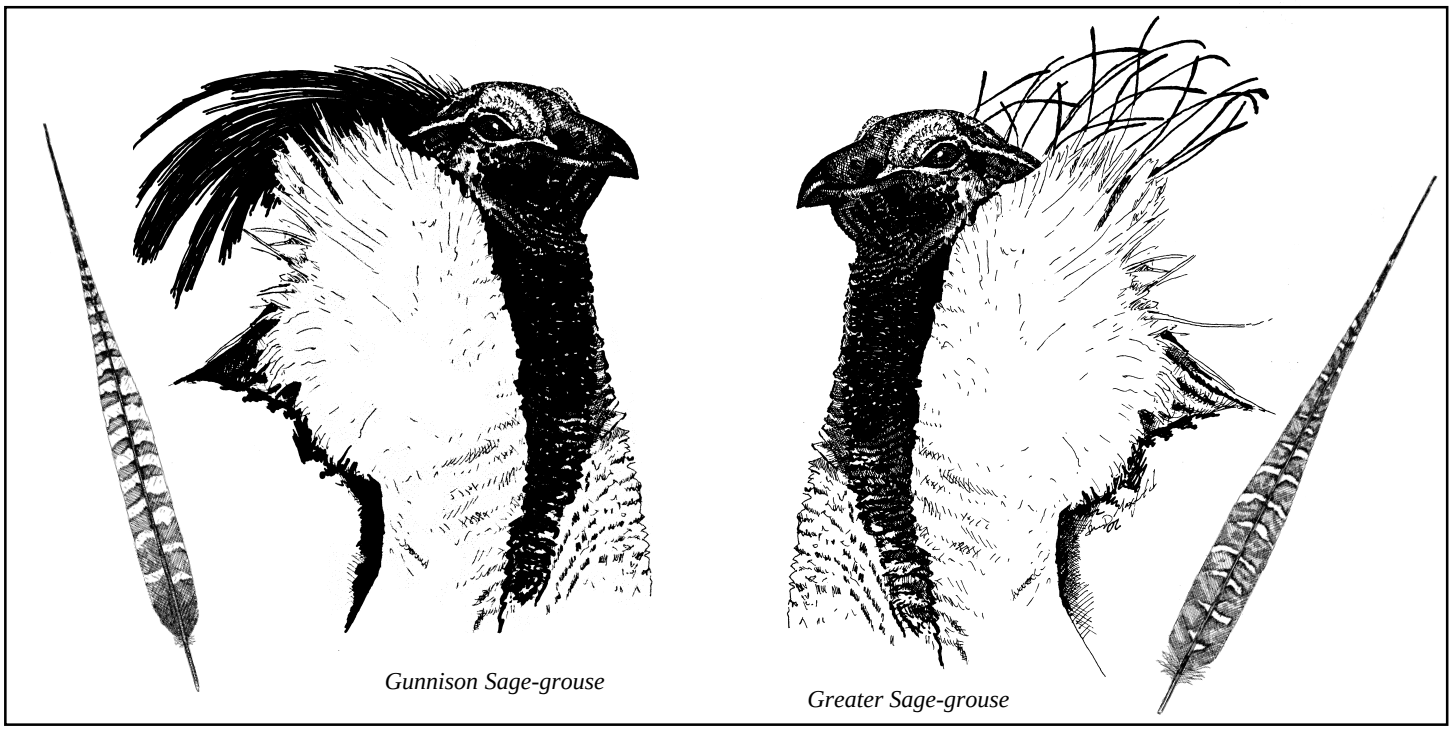
Sage-grouse

Greater Sage-grouse *(Centrocercus urophasianus)* and Gunnison Sage-grouse (*Centrocercus minimus*)



Gunnison Sage-grouse

Greater Sage-grouse

Sage-grouse, sage hen and sage chicken, are all common names used when referring to Utah's largest native grouse; a gallinaceous, or "chicken-like" bird, that has evolved over millennia in the vast sea of sagebrush rangeland found only in the west.

Sage-grouse are an icon of the west. Their presence indicates healthy, functioning sagebrush ecosystems and rangelands—important to the well being of humans as watersheds in the arid west.

Two species of sage-grouse are found in Utah. The Greater Sage-grouse (*Centrocercus urophasianus*) is found north and west of the Colorado River, while the Gunnison Sage-grouse (*Centrocercus minimus*) is found south and east of the Colorado River, mostly in San Juan County. Sage-grouse are presently found in 26 of Utah's 29 counties. They have been extirpated from Davis, Salt Lake and Washington counties.

The estimated spring breeding population of sage-grouse in Utah is 15,000-20,000 birds. Sage-grouse are listed on the Utah Sensitive Species List as a Species of Special Concern due to declining populations and limited distribution. The Gunnison Sage-grouse is listed as a "candidate" species under the Federal Endangered Species Act.

Description

The sage-grouse is a grayish-brown bird with a dark belly, and long and pointed tail feathers. The feet are feathered to the toes. The throat of the male is black, bordered with white at the rear. Yellow air sacs or esophageal pouches, covered with short, stiff, scale-like white feathers, are found on each side of the neck. The female has the same general appearance but lacks the air sacs and has a white throat.

The male (cock) Greater Sage-grouse is 25 to 30 inches in length while the female (hen) is smaller, averaging 20 inches long. Male Greater Sage-grouse weigh up to 7.2 pounds with females weighing up to 4.0 pounds. The Gunnison Sage-grouse male attains weights of only 5.0 pounds, while the Gunnison female weighs from 2.4 to 3.1 pounds.

Habitat

As their name suggests, these birds inhabit sagebrush plains, foothills and mountain valleys. Sagebrush is the dominant plant of necessary habitat. Where there is no sagebrush, there are no sage-grouse. A good understory of grasses and forbs, insects and associated wet meadow areas, are essential in sage-grouse habitat.

Food

Sage-grouse, unlike other gallinaceous upland game birds such as turkeys and pheasants, lack a well-developed muscular gizzard to process food. As such, sage-grouse have come to rely on soft foods such as the leaves of sagebrush in order to survive. During the winter, the sage-grouse diet consists, almost exclusively, of the pungent and pliable leaves of sagebrush. During summer, the fruiting heads of sagebrush, leaves and flower heads of clovers, dandelions, grasses and other plants are taken. Insects are also taken during the summer.

Reproduction

Annually, male sage-grouse gather on traditional "strutting grounds" or "leks" during March and April and put on a spectacular courtship performance. Males strut with tails erect and spread, and air sacs inflated. Females visit the grounds during the first part of April.

There is a very structured dominance hierarchy in the male sage-grouse on the lek. A male known as the "master cock" does most of the breeding of the female hens attracted to the lek. A few other males known as "dominant cocks" also do some of the breeding of the hens. Lesser males known as "guard cocks" and "outsider cocks" perform a lot of strutting and posturing while on the lek, but rarely do any of the breeding.

Nesting begins in April. Nests consist of shallow depressions lined with grass or twigs and are usually located under sagebrush. The hen lays from six to ten eggs which hatch after approximately 25 days of incubation. Most nests are located from 0.7 to 3.9 miles from the lek. Some hens have been documented to nest over 12 miles from the nearest lek.

Historical Status in Utah

Sage-grouse in Utah occupy sagebrush habitats from 4,000-9,000 feet in elevation in the Colorado Plateau and Great Basin geographic regions.

Distributed nowhere else in the world, except western North America, these birds were described by Lewis and Clark in 1805. Various other writings in pioneer journals and historical manuscripts describe the sage-grouse in numbers that used to, "blacken the sky!"

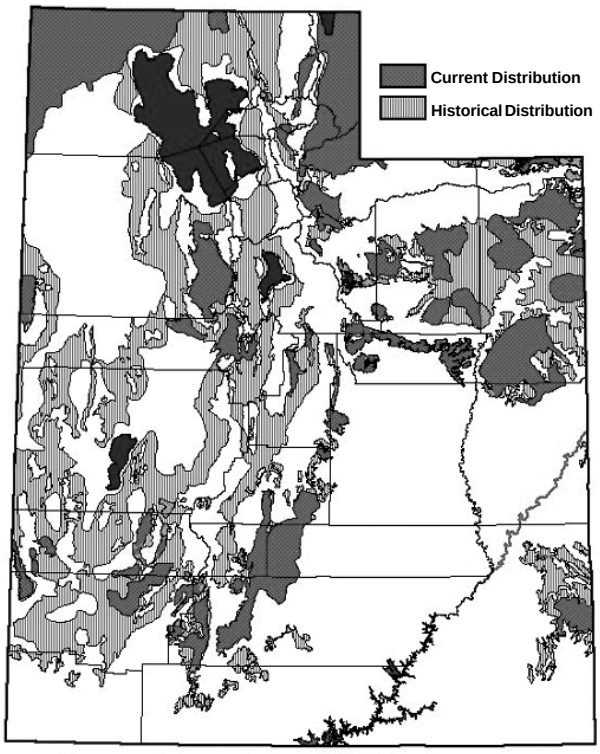
Franciscan missionaries Silvestre Vélez de Escalante and Francisco Atanasio Domínguez and their exploring party visiting Utah Valley in September 1776 were the first Europeans to describe sage-grouse in the Beehive state. They reported that "wild hens" (i.e., sage-grouse and [or] Columbian Sharp-tailed Grouse [*Tympanchus phasianellus columbianus*]) around Utah Lake were abundant and used by Native Americans as a source of food.

Early naturalists visiting Utah observed that sage-grouse were abundant, even near settlements until at least the 1870s. H. W. Henshaw in 1875, reported, "The sage hen is very numerous throughout Utah; its predilection, as its name implies, being for the open, barren plains of *Artemisia* (sagebrush); and whenever this plant exists in abundance, whether on the extensive stretches of open plain on the lowlands, entirely barren but for the growth of this shrub, or in the valleys high up among the mountains, this bird will not be looked for in vain."

Based on historical accounts and observations, it's likely that sage-grouse originally occurred in portions of all of Utah's 29 counties where there was sufficient sagebrush and grass/forb habitats to support birds. Present-day research suggests that sage-grouse were historically found throughout some 33.2% of Utah's landscape. The Greater Sage-grouse occupied 32.2% of Utah while the Gunnison Sage-grouse was found in 1.0% of the state.

Current Status in Utah

Today only 13.6% of Utah's landscape is inhabited by sage-grouse. The Greater Sage-grouse occupies 97.9% and Gunnison Sage-grouse 2.1% of this area. The current distribution of sage-grouse represents just 40.9 % of the historical distribution of sage-grouse in Utah. Thus, Greater and Gunnison Sage-grouse currently occupy 41.3% and 26.7 %, respectively, of their historical distribution.



Historical and current distribution of sage-grouse.

Outright losses, degradation and fragmentation of sagebrush habitats are suspected as the primary causes of sage-grouse population declines throughout Utah. Current research efforts underway in the Strawberry Valley area of Wasatch County have identified predation by nonnative red foxes as a limiting factor in sage-grouse population growth in the area.

A history of suppression of naturally occurring wildfires and resulting changes in rangeland fire intervals and intensity of wildfires, noxious weed encroachment, changes in domestic livestock and wild ungulate grazing schemes, and the construction of power lines, fences and oil and gas developments also contribute to declines in sage-grouse populations.

Management

In June of 2002, Utah Division of Wildlife Resources Regional Advisory Councils and the Utah Wildlife Board adopted a *Strategic Management Plan for Sage-grouse*. Within the plan, Utah was divided into 13 sage-grouse management units based on current distribution of birds. Sage-grouse conservation issues and concerns as well as suggested strategies for addressing those issues and concerns were identified for each of the 13 management units.

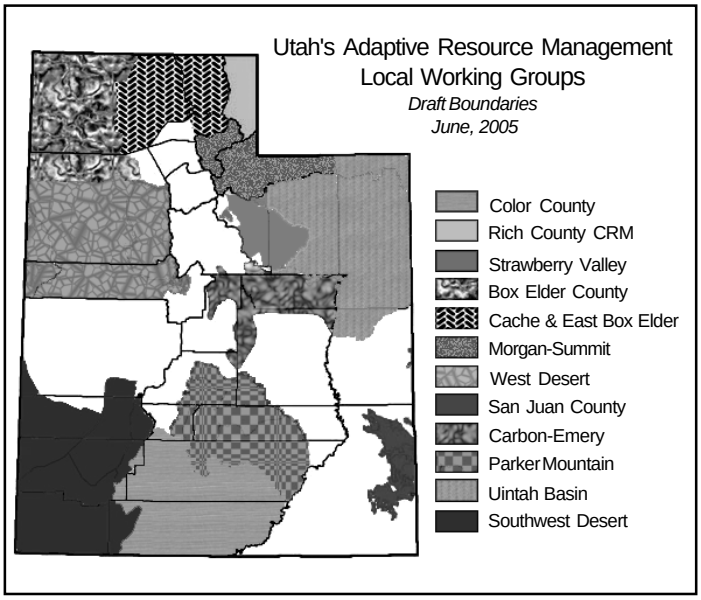
The conservation planning process outlined in the strategic management plan also called for the establishment of sage-grouse local working groups for each of the 13 management units. Local working groups are basically committees made up of local private citizens, farmers, ranchers, grazers and local grazing associations, local community leaders, county commissioners, local state senators and representatives, county extension agents, university personnel, conservation organizations, and state and federal natural resources management agency personnel.

Sage-grouse local working groups were tasked with completing local sage-grouse conservation plans that not only meet the needs of sage-grouse, but also the economic, political and social needs of local communities.

Beginning in spring of 2001, the Utah Division of Wildlife Resources and Utah State University Extension Services partnered to establish a Community-based Conservation Program to establish, facilitate and maintain sage-grouse local working groups in each of the 13 management units identified in the strategic management plan.

Since 2001, some of the management units have been combined and now there are a total of 12. To date sage-grouse local working groups have been established in all 12 of the sage-grouse management units. The crux of sage-grouse local working groups is to bring local people together to work cooperatively to benefit sage-grouse and benefit local communities that could potentially be affected by sage-grouse management issues, including the possibility of the birds being listed under the Federal Endangered Species Act.

Local working groups strive for consensus in their community decisions. In many sage-grouse management units, on-the-ground university graduate students, conducting experiments and research, are able to provide the local working group with timely population and habitat data. The data is used by the local working group to make educated and informed decisions based on science rather than hearsay or anecdotal information.



Most local working groups operate under the paradigm that, "If it's not good for communities, it's not good for sage-grouse." In nearly all cases this is so true. If local communities can survive, grow and prosper, while at the same time keeping sage-grouse part of Utah's landscape, there are no losers in this complex natural resource management issue.

Hunting

Because of their classification as an upland game species, there are annual hunting seasons allowing a limited take of sage-grouse in Utah. Hunters pursue sage-grouse because of the usefulness of their flesh as a unique game meat and because of the bird's elusiveness, which provides a unique or traditional challenge to hunters.

Hunters provide funds for management of sage-grouse through their purchase of hunting licenses and permits. However, sage-grouse hunting opportunity throughout Utah has diminished as local populations have declined.

Unlike other upland game birds, such as pheasants and quail, sage-grouse are more susceptible to overharvest than other upland game species because they have longer lives, lower reproduction, and lower annual mortality rates. For this reason, sage-grouse should be hunted more conservatively than other upland game species.

Per the *Strategic Management Plan for Sage-grouse* adopted in 2002 by the Utah Division of Wildlife Resources Regional Advisory Councils and the Utah Wildlife Board, sage-grouse are currently hunted only in those areas where there is a minimum breeding population of at least 500 birds over a running three-year average. As such there are only four areas in Utah where Greater Sage-grouse are currently hunted: western Box Elder County and all of Rich County in northern Utah; Blue and Diamond Mountains in northeastern Utah, and Parker Mountain in south-central Utah. The Gunnison Sage-grouse has not been hunted in Utah since 1981.

The strategic management plan allows for a harvest of no more than 10 percent of the estimated fall population in those areas open to hunting. As a result, Greater Sage-grouse hunting permit numbers are limited by areas open to hunting. Hunting permits are issued on a first come-first served basis until all permits are issued. The number of sage-grouse hunting permits issued annually is based on spring strutting grounds counts.

Season length is restricted to nine days and hunters are allowed to harvest only two birds per season. Utah is one of the most conservative states in providing sage-grouse hunting opportunity.

In 2003, a total of 954 two-bird permits were issued and 1,017 birds were harvested. In 2004, a total of 1,450 two-bird permits were issued and a total of 1,450 birds were harvested. In 2005, a total of 1,436 two-bird permits were issued.

There is little evidence to suggest hunting has caused sage-grouse population declines. Restrictions on hunting should not be viewed as a remedy for all sage-grouse population problems. Sage-grouse hunting has been prohibited for many years in Washington, Alberta and Saskatchewan but populations have not recovered as a result.

What You Can Do

- Join a local working group and participate in the preparation of a sage-grouse conservation plan with others who are concerned about the future of these birds.
- Volunteer through your local DWR, BLM or Forest Service office to help plant sagebrush in an effort to restore and maintain habitats.
- Join an organization that works to conserve western rangeland grouse such as the sage-grouse.
- Encourage local county commissions and other leaders to support habitat projects that benefit sage-grouse and discourage projects that remove sagebrush.

Additional Reading

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Wildlife Notebook Series No. 18
Produced by: Project WILD
Compiled by: Dean Mitchell, Upland Game Coordinator
Edited by: Diana Vos and Vicki Unander
Illustrated by: Brian Maxfield

STATE OF UTAH
NATURAL RESOURCES
Division of Wildlife Resources

December 2005